



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/820,224	04/06/2004	Pavan Kumar	12521-3	7120

757 7590 05/16/2005

BRINKS HOFFER GILSON & LIONE
P.O. BOX 10395
CHICAGO, IL 60610

EXAMINER

HAM, SEUNGSOOK

ART UNIT PAPER NUMBER

2817

DATE MAILED: 05/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

HA

Office Action Summary	Application No.	Applicant(s)	
	10/820,224	KUMAR ET AL.	
	Examiner	Art Unit	
	Seungsook Ham	2817	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 September 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 April 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>9/22/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 300, 302, 304, 314, 316, 308 (see spec., paragraphs [0053]-[0058]). It should be noted that the reference numerals of the third embodiment (p. 15-17) does not match with the figure 6. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1, 24, 28 and 29 are incomplete since the interior chamber (or inside of the first portion) must be coated with conductive material to operate as a comb-line filter. Such omission amounting to a gap between the elements. See MPEP § 2172.01.

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 28-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Scott et al. (US '687).

Scott et al. (figs. 1-3D) discloses a first portion 202 made of a first material; a second portion 201 made of a second material, and provided with a conductive layer 201B; the first portion and the second portion adapted for being attached together so as to define an interior chamber for conducting signals 203; and at least one resonator 204 attached to the second portion 201.

It should be noted that the conductive layer 201B (i.e., silver, col. 4, lines 45-55) of the second portion is more conductive than the first material 202 (i.e., aluminum, col. 6, lines 3-5).

Regarding claim 28, the material of the first portion (i.e., aluminum) has lesser density than the metal material of the second portion (gold or copper, col. 4, lines 45-66).

Regarding claim 30, Scott et al. also teaches that the first portion 202 can be covered with a conductive layer (col. 5, lines 45-53).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kasuga et al. (US '448) in view of Scott et al. (US '687).

Kasuga et al. (figs. 10) discloses a comb-line filter comprising: a housing including first and second portions 11, 12 being attached together to define an interior chamber for conducting signals; at least one resonator 22 attached to the second portion 12 and extending within the interior chamber; the at least one resonator is made of conductive material; a plurality of tuning screws 31-34 extends through a center of respective one of the at least one resonator; and a plurality of coupling screws 36, 38, 83, 84 for adjusting a response characteristic of the filter.

Kasuga et al. does not show the first portion made of a dielectric material and/or covered with a conductive layer.

Scott et al. (figs. 2-3D) discloses a similar comb-line filter having a housing 201 made of dielectric material and covered with a conductive material 201B for low-cost and lightweight filter.

It would have been obvious to one of ordinary skill in the art to provide the first portion made of dielectric material and/or covered with conductive material instead of

Art Unit: 2817

metal housing in the device of Kasuga et al. to obtain low-cost and lightweight filter device as taught by Scott et al. (col. 2, lines 12-15).

Regarding claims 5 and 6, providing ceramic or thermoplastic resonator is considered as an obvious design modification since such resonator is well known in the art (see also, Scott et al. fig. 3A, resonator 201A is made of plastic material).

Regarding claims 15, 18, and 22, providing tuning screws or coupling screws at the first portion is considered as an obvious modification since such design technique is well known in the art, and also it does not alter filter characteristics.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Sarkka (figs. 3 and 5) discloses a resonator disposed on opposite side of a tuning screw, and the tuning screw has a cylindrical end portion; and


Lye et al. discloses a conventional comb-line filter.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seungsook Ham whose telephone number is (571) 272-2405. The examiner can normally be reached on Monday-Thursday, 8:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal can be reached on (571)-272-1769. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2817

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Seungsook Ham
Primary Examiner
Art Unit 2817

sh